

**Business Case Analysis
for
Pre-Prepared Individual
Dinner Entrées
(Inport)**

**Prepared for:
The Under Secretary of the Navy**



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Table of Contents

1. Executive Summary

- 1.1 Description
- 1.2 Summary Table 5-Year ROI
- 1.3 Benefits

2. Background

- 2.1 Objectives/Scope – Detailed Description
- 2.2 Implementation Components

3. Benefits

- 3.1 Summary List
- 3.2 Individual Benefit Description
 - 3.2.1 Reduced Workload for Food Preparation and Clean Up
 - 3.2.2 Consistently High Quality Food Products
 - 3.2.3 Ability to Provide Increased Variety of Food Items
 - 3.2.4 Reduced Risk of Food Contamination
 - 3.2.5 Reduced Food Waste

4. Associated Cost Savings

- 4.1 Tangible Savings (Quantifiable)
 - 4.1.1 Workload Reduction
- 4.2 Intangible Savings (Non-Quantifiable)
 - 4.2.1 Quality of Life Impact
 - 4.2.2 Retention
 - 4.2.3 Food Safety
 - 4.2.4 Operations and Sustainment Savings

5. Cost to Implement

- 5.1 Proof of Concept Costs (Prototypes)
- 5.2 Deployed Systems Costs (Fleet-Wide Implementation)

6. Conclusions

- 6.1 Short Summary of Benefits
- 6.2 Assumed Cumulative Implementation Plan
- 6.3 Total Costs Savings over 5-Year Period

1. Executive Summary

1.1 Description: The use of select pre-prepared individual dinner meals for the evening meal while inport will enhance Quality of Life and reduce workload afloat. Assuming approximately 40 percent of a ship's time is spent in homeport, 1.1 million hours could be saved annually if this proposal was implemented fleet-wide. Pre-prepared individual dinner meals are defined as high quality, brand name "heat and serve" meals that include an entrée and vegetables. A salad bar, fruit bar, soup dispenser and dessert bar supplement these meals. Employment of this feeding strategy for the evening meal reduces food service workload cumulatively by 26 percent inport while providing increased variety of menu options. The offering of healthy choice meals can also improve nutrition for Sailors.

While inport, the food service operation prepares evening meals for the duty section and crewmembers that live onboard. The typical Aircraft Carrier feeds 350-400 personnel each evening and employs seven Mess Management Specialists and eight Food Service Attendants. This feeding strategy would allow Aircraft Carriers to prepare and serve the evening meal with three Mess Management Specialists and four Food Service Attendants. A Destroyer feeds fewer than 50 crewmembers, while employing two Mess Management Specialists and five Food Service Attendants. This feeding strategy would require only one Mess Management Specialist and one Food Service Attendant. The use of pre-prepared individual dinner meals supports Chief of Naval Operations' efforts to reduce workload afloat, especially during the Inter-Deployment Training Cycle. The return on investment for this proposal is provided in the table below.

1.2 Summary Table 5-Year ROI (Cost/Savings/ROI Per Annum):

	FY 00	FY 01	FY 02	FY 03	FY 04	Totals (\$M)
Total Annual Cost	0	0	0	0	0	0
Total Annual Savings	4.1	8.3	8.4	8.6	8.7	38.1
Return on Investment	4.1	8.3	8.4	8.6	8.7	38.1

Goal: Use pre-prepared individual dinner meals inport to reduce workload.
Requirement: Increase availability of pre-prepared dinner meals from food suppliers.

1.3 Benefits: Studies have demonstrated the advantages of pre-prepared individual dinner meals while inport include significant labor savings while maintaining or improving variety and customer satisfaction. Currently, afloat units are manned at 82 percent of allowance for Mess Management Specialists and 88 percent for General Detail (GENDET) personnel. A typical Navy food service operation afloat commences at 0530 and concludes at 1900 daily. Use of pre-prepared individual dinner meals allows management the flexibility to secure part of the food service operation workforce at approximately 1400 vice 1900. Workload savings per Mess Management Specialist and Food Service Attendant are approximately five hours per day inport. Challenges include an increase in plastic and metal waste while pierside. Increased use of pre-prepared individual dinner meals for the evening meal allows afloat units, while inport, to shift labor from food production to other work that is not being accomplished due to manning shortages. This proposal also allows ships to shift food service personnel into normal shipboard

duty sections, thereby expanding the number of duty sections for the entire ship. This proposal does not support a reduction in authorized billets since full food service production must be resumed while underway.

2. Background

2.1 Objectives/Scope – Detailed Description: While inport, “cook-from-scratch” evening meals will be replaced with high quality, brand name individual meals available through the Subsistence Prime Vendor program. Sailors will be provided an increased variety of meals to choose from, as well as access to a self-serve salad bar, instant soups, assorted breads, desserts, and beverages. Pre-prepared salads, breads, and desserts will be utilized to the greatest extent possible. Limited flatware and dinnerware will be utilized in order to minimize evening scullery operations.

- An initial study onboard USS FITZGERALD (DDG-62) resulted in weekly labor savings of 175 hours while feeding approximately 46 patrons each evening. Mess Management Specialist workload decreased by 16 percent. Food Service Attendant workload decreased by 27 percent. The ship was able to afford feeding of pre-prepared individual dinner meals within current funding constraints. Food quality for these meals was rated as 3.86 on a scale of 1 to 5, comparable to “cook-from-scratch” food items. Food quantity was rated as 3.69. USS FITZGERALD (DDG-62) typically offered two entrées for the evening meal. Use of pre-prepared individual dinner meals allows the ship to offer 16 different entrées. Entrée choice can be tailored to meet crew desires and improve nutrition.

- Follow-on testing was conducted onboard USS LAKE CHAMPLAIN (CG-57), USS HIGGINS (DDG-76), USS VALLEY FORGE (CG-50), and USS DUBUQUE (LPD-8) with similar results.

- Seven other ships are in the planning stage for implementing pre-prepared individual dinner meals while inport.

2.2 Implementation Components: Subsistence Prime Vendors for CONUS have been provided listings of candidate pre-prepared individual dinner meals and are incorporating these items into the food service catalogs. Routine pierside deliveries will eliminate concern over limited refrigerated storage space. Prior to entering port, ships will place an order for pre-prepared individual dinner meals. These items will be delivered to the ship at whatever periodicity the ship identifies. These items will be consumed while inport and discontinued once the ship is underway. Though financial constraints exist, each ship testing this feeding strategy has successfully operated within the allotted Basic Daily Food Allowance.

No funding strategy is required for this initiative. An implementation strategy has been developed in order to ensure key decisions and metrics are identified and acted upon. A cooperative effort with the Defense Supply Center Philadelphia will develop a plan to increase the availability of pre-prepared individual dinner meals throughout CONUS. An educational program, designed to

familiarize afloat units with the advantages of pre-prepared individual dinner meals inport will be conducted via Naval messages, professional publications and hands-on training onboard ships by the Advanced Foods and Nutrition Training Team (to include a NAVSUP registered dietitian, a Certified Executive Chef and Navy Food Management Team members). A cooperative effort between COMNAVSUPSYSCOM and the Fleet will be undertaken to ensure increased utilization of pre-prepared individual dinner meals inport. Training will first be conducted for all CVNs and "L" Decks during FY 00 due to the volume of subsistence consumed on these decks. On a monthly basis, starting 1 July, COMNAVSUPSYSCOM will provide Type Commanders a report detailing the amount of pre-prepared individual dinner meals consumed by each platform. The measure of success for this proposal will be a trend of consistently increasing consumption of these food items.

Some ships have elected to use consumable flatware and dinnerware for the evening meal, resulting in reduced scullery operations. Costs associated with the use of disposable trays, serving dispensers, plates, and cups are estimated to be \$0.15 per person per day. Though this cost is approximately \$7 for a Destroyer and \$55 for an Aircraft Carrier for each day inport, it is offset by some degree by decreased costs associated with reduced scullery operations.

3. Benefits

3.1 Summary List: Potential benefits will include:

- Reduced workload for food preparation and clean up
- Consistently high quality food products
- Ability to provide increased variety of food items
- Reduced risk of food contamination
- Reduced food waste

3.2 Individual Benefit Description

3.2.1 Reduced Workload for Food Preparation and Clean Up: Pre-prepared individual dinner meals require less preparation time. These meals are pre-made, requiring only pre-heating before serving. Time spent preparing and mixing ingredients is eliminated. Preparation of the dinner meal requires removing it from the reefer, warming it in the oven and placing it on the serving line. Many meals are pre-cooked in their own serving dish, eliminating clean up of cooking and serving pans. Studies have demonstrated an average time savings of 26 percent for food preparation and clean up. Based on reduced preparation and clean up times, the food service staff for the evening meal can be reduced. For ships tested to date, Mess Management Specialist manning was reduced from 5 personnel to 1 person after 1400 daily. Food Service Attendant manning was reduced from 6 personnel to 1 person.

3.2.2 Consistently High Quality Food Products: The use of pre-prepared dinner meals provides a consistent quality product for each evening meal. Surveys have shown that customer satisfaction is equal or better than "cook-from-scratch" evening meals. Consistent food

quality improves Quality of Life for Sailors. USS FITZGERALD (DDG-62) reported that on a scale of 1-5, food quality was rated as 3.86. Food quantity was rated as 3.69.

3.2.3 Ability to Provide Increased Variety of Food Items: The labor-intensive nature of “cook-from-scratch” products precludes many galleys from offering more than two entrées for the evening meal. The use of pre-prepared individual dinner meals while inport allows participating food service operations to offer a wider variety of entrées. Ships utilizing pre-prepared meals for the evening meal inport are offering a choice from up to 16 different meals. This level of variety would be unachievable without the use of pre-prepared meals.

3.2.4 Reduced Risk of Food Contamination: Increased use of pre-prepared individual dinner meals can improve food safety. Pre-prepared individual dinner meal production is conducted under strict sanitary conditions to include microbiological testing. Food preparation for the evening meal becomes a “cook-to-order” operation, virtually eliminating leftovers. Leftovers pose one of the greatest threats to food safety due to the difficulty in maintaining safe storage and serving temperatures. Reduced leftovers provide less opportunity for food contamination and resultant food borne illness.

3.2.5 Reduced Food Waste: Since pre-prepared individual dinner meals are “heat and serve,” only quantities required would be prepared, reducing food waste.

4. Associated Cost Savings

The increased use of pre-prepared individual dinner meals while inport provides both tangible and intangible savings. Tangible savings can be quantified accurately. Intangible savings are considered as those either impossible to quantify or beyond the scope of this analysis.

4.1 Tangible Savings

4.1.1 Workload Reduction (\$8.3M annual savings): Converting from a “cook-from-scratch” food service operation to the use of pre-prepared individual dinner meals while inport has demonstrated significant workload reductions. USS FITZGERALD’s (DDG-62) food service operation saves 175 hours/week while feeding approximately 322 evening meals/week. Similar savings can be anticipated for all ships. These savings are distributed between Mess Management Specialist and Food Service Attendant workload. For purposes of this proposal, Mess Management Specialist personnel impacted were assumed to be at the E-3 paygrade with a FY 00 composite standard pay rate of \$29,025 per year. Food Service Attendants impacted were assumed to be at the E-2 paygrade with an FY 00 composite standard pay rate of \$26,250, annually. It is also assumed that ships are in homeport 40 percent of the time. Based on these assumptions and studies conducted, annual savings of 302 man-years is possible. This workload reduction can only be realized while inport.

4.2 Intangible Savings

4.2.1 Quality of Life Impact: Food service is arguably the #1 morale driver afloat. Any improvements in food service through use of pre-prepared individual dinner meals while inport will result in improved morale and Quality of Life for Sailors. Specifically, Mess Management Specialist and Food Service Attendant workload will decrease, improving their Quality of Life. Additionally, ships that utilize Mess Management Specialists and Food Service Attendants to supplement duty section personnel have been able to expand the number of duty sections inport, positively impacting Quality of Life for Sailors.

4.2.2 Retention: Improved Quality of Life resulting from the use of pre-prepared dinner meals while inport may improve the overall afloat experience for Sailors and may improve retention. Though few Sailors would reenlist due to outstanding food in Navy, a less than outstanding food service operation may be just one more reason not to reenlist.

4.2.3 Food Safety: Use of pre-prepared individual dinner meals will improve food safety by reducing the opportunity for food borne illness. Loss of production associated with food borne illness could also be avoided.

4.2.4 Operations and Sustainment Savings: Though beyond the scope of this analysis, Operations (fuel/electric and any other costs associated with ship/equipment operation) and Sustainment (maintenance costs, etc.) savings will result through reduced steam, electricity, and equipment requirements for the evening meal service.

5. Cost to Implement

5.1 Proof of Concept Costs (Prototypes): There are no proof of concept costs. Prototypes have already been conducted.

5.2 Deployed Systems Costs (Fleet-Wide Implementation): There are no deployed systems costs; however, fleet units will need to closely monitor the financial impact of utilizing pre-prepared individual dinner meals to ensure they operate within current Basic Daily Food Allowance funding constraints.

6. Conclusions

6.1 Short Summary of Benefits: Based on the methodology applied in this analysis, the Navy will obtain a significant amount of savings through increased use of pre-prepared individual dinner meals while inport. Improved Quality of Life and reduced workload will constitute the primary benefits.

6.2 Assumed Cumulative Implementation Plan:

FY 2000 and beyond	100%
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6.3 Total Costs Savings over 5-Year Period: Using the estimated implementation cost and potential savings, an estimated 5-year total savings of \$38.1M is forecast through FY 04. In addition to these savings, Quality of Life and retention will also be positively impacted.

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